Indiana Department of Environmental Management
Office of Air Quality
Rule Fact Sheet
(February 6, 2002)
(Updated August 7, 2002)]

Compliance Methods Applicable to Dip or Flow Operations at Miscellaneous Metal Coating Operations Regulated at 326 IAC 8-2-9
 # 01-251(APCB)

Overview
Amends 326 IAC 8-1-2, compliance methods in the volatile organic compound rules to provide compliance methods applicable to dip or flow operations at miscellaneous metal coating operations regulated at 326 IAC 8-2-9.

Citations Affected
Amends: 326 IAC 8-1-2.

Affected Persons
Twenty-one companies identified as having dip or flow operations and citizens in the vicinity of those companies.

Potential Cost
The potential cost of this proposed rule is low. Costs associated with setting up a dip or flow coating operation would be offset by less paint used as a result of greater efficiency in applying the coating.

Outreach
In addition to the publication of the Second Notice of Comment Period in the Indiana Register, IDEM sent copies of the Second Notice of Comment Period to 21 companies identified as having dip or flow operations.

Description

The vast majority of coatings available to be applied to a specific surface contain VOCs. There are a number of ways to apply coatings to a surface including spray guns and dip or flow operations. Dip and flow applications are efficient coating application methods with high coating efficiency and low coating waste.

In 1996, in response to a citizen petition regarding compliance methods applicable to dip or flow operations that apply VOC containing coatings to miscellaneous metal parts, the Indiana Air Pollution Control Board adopted a rule that added equivalent emission limitations at 326 IAC 8-1-2(a)(9) applicable to miscellaneous metal coating operations subject to 326 IAC 8-2-9 and compliance methods for dip and flow operations only, at 326 IAC 8-1-2(a)(10).

Prior to promulgation of this rule, an owner or operator of a miscellaneous metal coating operation was required to determine compliance on a daily volume-weighted average basis. This was inconsistent with some procedures required for proper operation of dip and flow facilities. Allowing compliance to be determined only on a daily volume-weighted average basis would require many metal coaters to change from dip or flow coating to applying coatings using a spray gun. Even though there would be less VOC emissions if a

part was coated by dipping or flow coating, neither of these techniques could be used as a method to apply a VOC containing coating under certain circumstances because there were neither equivalent emissions limitations nor an appropriate method to determine compliance with the emission limits. The rule that the Air Pollution Control Board adopted provided equivalent emission limitations for sources subject to 326 IAC 8-2-9 and provided two (2) ways to demonstrate compliance. Compliance could be demonstrated using a monthly volume-weighted average of all coatings applied in a coating tank, flow coater, or flow coating line, or it could be demonstrated using compliant coatings in the tank or reservoir and maintaining a viscosity of the coatings that is not less than the viscosity of the initial coating.

Although IDEM had worked with the United States Environmental Protection Agency (U.S. EPA) during the development of the rule in 1996, after it was promulgated, U.S. EPA indicated that it was not approvable. U.S. EPA stated that 326 IAC 8-1-2(a)(10)(A), which provides for monthly averaging, is a relaxation of the daily compliance standard, and 326 IAC 8-1-2(a)(10)(B), which provides for using viscosity as a measure of compliance as was done under Subpart JJ NESHAP (National Emission Standards for Wood Furniture Operations, 40 CFR 63.804), was unacceptable for two reasons. First, Subpart JJ established compliance procedures applicable to volatile hazardous air pollutants (VHAPs) but not to VOCs. Second, U.S. EPA established test methods in 40 CFR 63.805 applicable to VHAPs sources that wished to monitor viscosity to maintain compliant coatings but these test methods had not been approved for use by VOC sources that wished to monitor viscosity to maintain compliant coatings. Additionally, U.S. EPA stated that "commissioner discretion" language at existing rule 326 IAC 8-1-2(a)(5)(B) provided a potential relaxation of the state implementation plan (SIP) and therefore was not approvable.

Many businesses that are interested in using dip or flow coating are required to have a Title V permit. The rules regulating emissions from VOC containing coatings applied to miscellaneous metal parts are part of the existing SIP and therefore applicable requirements for Title V purposes. At this time, U.S. EPA has not approved the alternative dip or flow coating compliance options provided in the revisions to 326 IAC 8-1. Therefore until 326 IAC 8-1-2(a) subdivisions (5), (9), and (10) are amended and approved by U.S. EPA as amendments to the SIP, businesses can not comply with 326 IAC 8-2-9 using the alternative compliance options for dip or flow operations and some affected sources that have dip or flow coating operations cannot receive their Title V operating permit.

The department and U.S. EPA have identified approvable amendments to 326 IAC 8-1-2 that provide a compliance option for sources using dip or flow coating as application techniques. This option relies on determining compliance "as applied" based on the interval between solvent additions and use of an equation. Additionally, the commissioner discretion issue at 326 IAC 8-1-2(a)(5) will be addressed by determining compliance according to a specified equation.

Update since preliminary adoption

Background - viscosity as a measaure of compliance and options. At the first public hearing, the Air Pollution Control Board directed IDEM staff to further pursue viscosity as an alternative method to determine compliance when solvents or thinners are added to a dip tank to maintain an acceptable coating thickness of the material in the dip tank. This compliance option exists in the current state rule that U.S. EPA previously has stated

they would not approve as a revision to the state implementation plan. However, upon further discussions U.S. EPA suggested as an alternative to viscosity that compliance be determined using a coating "as applied" based on the time interval between solvent additions to the dip tank and a specified equation. After preliminary adoption of the draft rule and further discussions, we have modified this option to provide criteria to allow for emission averaging of VOCs on a 30-day rolling average basis. Calculation of a 30-day rolling average is more straightforward than the averaging technique that was preliminarily adopted. However, for either averaging calculation, if a dip tank is initially filled with compliant coatings then noncompliant solvents or thinners can not be added to the tank. But if the dip tank is filled with better than compliant coatings, then noncompliant solvents or thinners may be added to the dip tank with compliance determined "as applied." IDEM has discussed with the commenter U.S. EPA's suggestion to determine compliance on an "as applied" basis based on a 30-day rolling average.

Recommendation. Based on discussions with U.S. EPA and the commenter, the compliance option that was preliminarily adopted rule at 326 IAC 8-1-2(a)(10) has been stricken. The recommended compliance option now presented at 326 IAC 8-1-2(a)(9) provides for determining compliance "as applied" (as in the rule that was preliminarily adopted) but based on a 30-day rolling average basis instead of being based on the interval between VOC-containing solvent additions and the use of an equation.

Background - rule reorganization for the purpose of reducing redundancy. When redrafting rule language subsequent to preliminary adoption it was apparent that proposed 326 IAC 8-1-2(a)(5) and 326 IAC 8-1-2(a)(9) both addressed "equivalent emission limitation based on an actual measured transfer efficiency greater than the specified baseline transfer efficiency" with identical requirements. Existing 326 IAC 8-1-2(a)(5) applies to: 326 IAC 8-2-2(b)(2), automobile and light duty truck assembly coating operations; 326 IAC 8-2-6, metal furniture coating operations; and 326 IAC 8-2-7, large appliance coating operations. Existing 326 IAC 8-1-2(a)(9) applies to 326 IAC 8-2-9, miscellaneous metal coating operations.

Recommendation. For final adoption, add the miscellaneous metal coating operations category to the list in at 326 IAC 8-1-2(a)(5)(A). Delete the existing and proposed language in subdivision (9) and in its place insert the compliance option that provides for averaging of VOCs on a 30-day rolling average for miscellaneous metal coating operations regulated at 326 IAC 8-2-9 that dip coat or use flow coaters. This option was discussed in the previous recommendation.

Consideration of Factors Outlined in Indiana Code 13-14-8-4

Indiana Code 13-14-8-4 requires that in adopting rules and establishing standards, the board shall take into account the following:

1) All existing physical conditions and the character of the area affected.

2) Past, present, and probable future uses of the area, including the character of the uses of surrounding areas.

3) Zoning classifications.

4) The nature of the existing air quality or existing water quality, as appropriate.

5) Technical feasibility, including the quality conditions that could reasonably be achieved through coordinated control of all factors affecting the quality.

6) Economic reasonableness of measuring or reducing any particular type of pollution.

7) The right of all persons to an environment sufficiently uncontaminated as not to be injurious to:

(A) human, plant, animal, or aquatic life; or
(B) the reasonable enjoyment of life and property.

Consistency with Federal Requirements

The amended rules are consistent with federal rules.

IDEM Contact

Additional information regarding this rulemaking action can be obtained by calling (800) 451-6027 (in Indiana), press 0 and ask for Patricia Troth, Rule Development Section, Office of Air Quality, (or extension 3-5681 or dial (317) 233-5681.